Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (original): A wide band modulation PLL, comprising:

a PLL part, including:

a voltage controlled oscillator;

a frequency divider that divides a frequency of an output signal of the voltage controlled oscillator;

a phase comparator that outputs a signal based on a phase difference between a reference signal and the output signal of the frequency divider; and

a loop filter that outputs an output to the voltage controlled oscillator so as to average the output of the phase comparator;

a first modulation input part that inputs a first modulation signal to the voltage controlled oscillator based on inputted modulation data for modulating; and

a second modulation input part that inputs a second modulation signal to a position different from the voltage controlled oscillator in the PLL part based on the modulation data,

wherein the voltage controlled oscillator includes a first control terminal to which the first modulation signal is inputted and a second control terminal to which a signal

based on the second modulation signal is inputted; and

wherein the first modulation input part has a modulation sensitivity calculation unit that calculates a first modulation sensitivity in the first control terminal and a modulation factor adjustment unit that adjusts a modulation factor of the modulation data based on the calculated first modulation sensitivity and outputs the first modulation signal.

Claim 2 (original): The wide band modulation PLL as set forth in claim 1, wherein the modulation sensitivity calculation unit has a modulation sensitivity calculation part that measures a signal inputted to the second control terminal, that calculates a second modulation sensitivity in the second control terminal, that measures a value indicating a ratio between the second modulation sensitivity and the first modulation sensitivity, and that calculates the first modulation sensitivity based on the calculated second modulation sensitivity.

Claim 3 (currently amended): The wide band modulation PLL as set forth in claim 1 ~~or 2~~, wherein the first modulation input part has an A/D converter that makes digital conversion of a signal inputted to the second control terminal of the voltage controlled oscillator, the modulation sensitivity calculation unit, the modulation

factor adjustment unit, and a D/A converter that makes analog conversion of an output of the modulation factor adjustment unit and that outputs the output to the first control terminal.

Claim 4 (currently amended): The wide band modulation PLL as set forth in ~~any one of claims 1 and 2~~claim 1, wherein the first modulation input part includes an A/D converter that makes digital conversion of a signal inputted to the second control terminal of the voltage controlled oscillator, the modulation sensitivity calculation unit, and the modulation factor adjustment unit;

wherein the modulation factor adjustment unit outputs a digital signal to the first control terminal; and

wherein the voltage controlled oscillator changes a frequency based on the digital signal inputted to the first control terminal.

Claim 5 (currently amended): The wide band modulation PLL as set forth in any ~~one of claims 1 through 4~~claim 1, wherein the second modulation input part has a frequency dividing ratio generation unit that controls a frequency dividing ratio of the frequency divider based on carrier frequency data and the modulation data.

Claim 6 (currently amended): The wide band modulation PLL as set forth in ~~any one of claims 1 through 4~~claim 1, wherein the second modulation input part has a direct digital synthesizer that generates a modulation signal based on carrier frequency data and the modulation data and that outputs the modulation signal to the phase comparator.

Claim 7 (currently amended): The wide band modulation PLL as set forth in ~~any one of claims 1 through 6~~claim 1, wherein the first modulation input part calculates the first modulation sensitivity, adjusts a modulation factor and outputs the first modulation signal at the time of an activation of the wide band modulation PLL and every predetermined period is elapsed after the activation.

Claim 8 (original): The wireless terminal apparatus incorporating the wide band modulation PLL according to any one of claims 1 through 7.

Claim 9 (original): A modulation factor adjustment method of a wide band modulation PLL comprising a PLL part including a voltage controlled oscillator, a frequency divider for dividing a frequency of an output signal of the voltage controlled oscillator, a phase comparator for outputting a signal according to a phase difference between a reference signal and an output signal of the frequency

divider, and a loop filter for averaging an output of the phase comparator and outputting the output to the voltage controlled oscillator, the method comprising:

inputting a first modulation signal to a first control terminal of the voltage controlled oscillator for modulating;

inputting a second modulation signal to a position different from the voltage controlled oscillator in the PLL part based on the PLL by inputting carrier frequency data;

calculating a first modulation sensitivity in the first control terminal of the voltage controlled oscillator, and

adjusting a modulation factor of the first modulation signal based on the calculated first modulation sensitivity.

Claim 10 (original): The modulation factor adjustment method of a wide band modulation PLL as set forth in claim 9, wherein the step of calculating the first modulation sensitivity comprises the steps of:

measuring an input voltage inputted to a second control terminal being different from the first control terminal in the voltage controlled oscillator based on the second modulation signal;

calculating a second modulation sensitivity in the second control terminal; and

measuring a value indicating a ratio between the second modulation sensitivity and the first modulation sensitivity, and calculating the first modulation sensitivity based on the calculated second modulation sensitivity.